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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,936	03/25/2004	Michael William Howe	TS6734	6885

23632 7590 03/20/2006

SHELL OIL COMPANY
P O BOX 2463
HOUSTON, TX 772522463

EXAMINER

BLACKWELL, GWENDOLYN A

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

10/808,936

Applicant(s)

HOWE ET AL.

Examiner

Gwendolyn Blackwell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) 19-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-18, drawn to a coated substrate, classified in class 428, subclass 432.
 - II. Claims 19-35 and 53-69, drawn to a method of making, classified in class 427, subclass 372.2.
 - III. Claims 36-52, drawn to a hydrophilic coated substrate, classified in class 428, subclass 432.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Group II and Group I are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case process can be used to make a materially different product. The process calls for making a hydrophilic coating. The product does not require that the coating is hydrophilic as required by the process claims.

3. Inventions of Group II and Group III are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by a materially different method. Instead of applying the

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composition to the substrate than drying the coating, the coating can be formed separately on a release film and applied to the substrate in a ready to use form through lamination.

4. Inventions of Group I and Group II are directed to related products. The related inventions are distinct if the inventions as claimed do not overlap in scope, i.e., are mutually exclusive; the inventions as claimed are not obvious variants; and the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect. See MPEP § 806.05(j). In the instant case, the products can have a different mode of operation and function. The product of Group I is comprised of a coating on a substrate made from the reaction product of a metal oxide, solvent, and a surfactant. The product of Group II is a hydrophilic coating on a substrate wherein the coating consists essentially of the reaction product of a metal oxide and a solvent. The product of Group II has to be a hydrophilic coating on a substrate while the product of Group I can be any type of coating as long as at least the three ingredients listed above are part of the reaction product of the coating.

5. Because these inventions are independent or distinct for the reasons given above and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Yukiko Iwata on February 23, 2006 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-18. Affirmation of this election must be made by applicant in replying to this Office action. Claims 19-69 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102/103

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-6, 8-11, and 13-18 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over United States Patent no. 6,238,798, Kang et al.

Regarding claim 1

Kang et al disclose a ceramer composition comprised of colloidal inorganic oxide particles (metal oxide composition)¹, a surface treating agent (surfactant), (column 3, lines 52-67), as well as a solvent or dispersant, (column 17, lines 64-67), to be coated on a substrate, (column 3, lines 21-24), meeting the limitations of claim 1.

In the alternative, while of a solvent may be optional it is obvious to one skilled in the art at the time of invention to modify the ceramer composition with a solvent in order to reduce the viscosity of the composition in order to enhance the coating characteristics of the composition, (column 17, lines 65-67).

Regarding claim 2-5 and 8-9

The metal oxides present in the colloidal metal oxide composition are silica and alumina, (column 11, lines 36-42), meeting the limitations of claims 2-3 and 8-9. The mean particle size of the particles ranges from about 2 – about 75 nm, (column 11, lines 13-18), meeting the requirements of claims 4-5.

Absent a showing to the contrary, it would have been obvious to one of ordinary skill in the art at the time of invention to have selected the overlapping portion of the ranges disclosed

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by the reference because overlapping ranges have been held to be a prima facie case of obviousness. *In re Malagari*, 182 USPQ 549.

Regarding claims 6 and 10-11

The colloidal metal oxide composition (dispersion) is provided in a sol wherein the dispersant is water, (column 12, lines 35-42), meeting the limitations of claim 6. The solvent used in the composition can include alcohols such as ethanol, n-butanol, methyl ethyl ketones, methyl isobutyl ketone, glycol ethers and combinations thereof, (column 18, lines 15-35), meeting the limitation of claims 10-11.

Regarding claims 13-16

A chemical composition and its properties are inseparable. *MPEP 2112.02*. Because the prior art exemplifies the applicant's claimed composition in relation to the coating, the claimed physical properties relating to pencil hardness and hydrophilicity are present in the prior art of record. Absent an objective evidentiary showing to the contrary, the addition of the claimed physical properties to the claim language fails to provide patentable distinction over the prior art of record, meeting the limitations of claims 13-16.

Regarding claims 17-18

The ceramer composition can be applied to glass, plastic, automobile windows, and building windows, (column 21, lines 7-21), meeting the limitations of claims 17 and 18.

12. Claims 1-16 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over United States Patent Application Publication 2003/0203991, Schottman et al.

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Regarding claim 1-3, 6-7, 10-11, and 15-16

Schottman et al disclose a coating composition comprised of an aqueous component A (comprised of a surfactant of water, a solvent of isopropanol and a metal oxide of colloidal silica, see Example 2, page 15 sections 0235-0236), an aqueous component B (comprised of a surfactant of water, a solvent of isopropanol, a metal oxide of colloidal silica, Example 1, page 15, sections 0233-0234) and a colloidal silica, crosslinker, and surfactant in a water isopropyl (isopropanol) mix. The coating was placed on a substrate having a contact angle below 10 degrees, (Example 19, page 17, section 0269), meeting the limitations of claims 1-3, 6-7, 10-11, and 15-16.

As the coating has a contact angle below 10 degrees, the range for the contact angle as set forth in Example 19 is taken to encompass Applicant's claimed range of 0-2 degrees. Absent a showing to the contrary, it would have been obvious to one of ordinary skill in the art at the time of invention to have selected the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness. *In re Malagari*, 182 USPQ 549.

Regarding claims 4-5

The particle size of the colloidal silica preferably range from 100-800 Å (10-80 nm), (page 8, section 0133), meeting the limitations of claims 4-5.

Absent a showing to the contrary, it would have been obvious to one of ordinary skill in the art at the time of invention to have selected the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness. *In re Malagari*, 182 USPQ 549.

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Regarding claims 8-9 and 12

The colloidal metal oxide can be prepared as colloidal silica or a mixed colloidal silica/alumina mix, (page 8, sections 0133-0135), meeting the limitations of claims 8-9. It is known in the art to incorporate surfactants into polyurethanes prepared with polyvinylpyrrolidone, (pages 2-3, section 0030). One of the purposes of Schottman et al is to create a coating composition that is not easily susceptible to erosion or leaching out of the surfactant, (page 3, section 0031). Example 46 use a surfactant such as sodium sulfosuccinate in the coating composition, (pages 20-21, section 0311), meeting the limitations of claim 12.

Regarding claims 13-14

A chemical composition and its properties are inseparable. *MPEP 2112.02*. Because the prior art exemplifies the applicant's claimed composition in relation to the coating, the claimed physical properties relating to pencil hardness and hydrophilicity are present in the prior art of record. Absent an objective evidentiary showing to the contrary, the addition of the claimed physical properties to the claim language fails to provide patentable distinction over the prior art of record, meeting the limitations of claims 13-14.

Regarding claims 17-18

The coating composition can be applied to metal, plastic and glass. In particular the coating can be used on windows, windshields, greenhouse panels and the like, (page 4, section 0055), meeting the limitations of claims 17-18.

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Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPNs 6,037,289; 6,387,519; and 6,881,779 disclose coating compositions similar to that as claimed by Applicant.

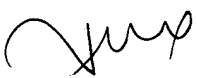
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn Blackwell whose telephone number is (571) 272-1533. The examiner can normally be reached on Monday - Thursday; 6:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gwendolyn Blackwell
Examiner
Art Unit 1775




JENNIFER MCNEIL
PRIMARY EXAMINER

3/15/04